Abstract

An apparatus is disclosed for supplying a refrigerant fluid to a cooling device, such as a cryosurgical probe. An arrangement of valves may control the supply of fluid to and from the cooling device. Fluid may flow in a forward direction through the cooling device for generating cooling by expansion of the fluid in the cooling device. The apparatus may execute a programmed sequence of cooling and heating cycles automatically. Backflushing of the fluid may be used for clearing contaminants from the inlet side of the cooling device. A pulse width modulated control signal may be used to control one of the valves to have a variable effective aperture. A flow rate sensor may detect the flow rate through the cooling device. The detected flow rate may be used to detect an occurrence of a blockage and/or for controlling the fluid supplied to the cooling device. A blockage may be cleared by automatic backflushing.